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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/708,556	03/11/2004	Amit GOYAL	TI-36313	2555
23494	7590	01/02/2008	EXAMINER	
TEXAS INSTRUMENTS INCORPORATED			LEE, PING	
P O BOX 655474, M/S 3999			ART UNIT	PAPER NUMBER
DALLAS, TX 75265			2615	
NOTIFICATION DATE		DELIVERY MODE		
01/02/2008		ELECTRONIC		

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

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Office Action Summary	Application No.	Applicant(s)
	10/708,556	GOYAL, AMIT
	Examiner	Art Unit
	Ping Lee	2615

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
 - If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
 - Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) Responsive to communication(s) filed on 15 October 2007.
- 2a) This action is **FINAL**. 2b) This action is non-final.
- 3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) Claim(s) 1-39 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) Claim(s) _____ is/are allowed.
- 6) Claim(s) 1-12, 18-23, 33-39 is/are rejected.
- 7) Claim(s) 13-17 and 24-32 is/are objected to.
- 8) Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) The specification is objected to by the Examiner.
- 10) The drawing(s) filed on _____ is/are: a) accepted or b) objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) All b) Some * c) None of:
1. Certified copies of the priority documents have been received.
 2. Certified copies of the priority documents have been received in Application No. _____.
 3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date. _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Election/Restrictions

1. Applicant's election of species 1 in the reply filed on 10/15/07 is acknowledged. Because applicant did not distinctly and specifically point out the supposed errors in the restriction requirement, the election has been treated as an election without traverse (MPEP § 818.03(a)).

Claim Rejections - 35 USC § 102

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

3. Claims 1-6, 9, 10, 18, 19 and 33-38 are rejected under 35 U.S.C. 102(e) as being anticipated by Scarlett et al (hereafter Scarlett) (US 6,856,046).

Regarding claims 1, 4, 9, 33, 36, Scarlett discloses a method and a corresponding device performed associated with a jack, said jack containing a plurality of connection points, said method comprising:

examining an impedance present between at least a pair of said plurality of connection points (col. 3, lines 14-17 and 46-50); and

determining whether a headset is present in said jack based on a value of said impedance (determining the type of the headset inherently determining whether a headset is present in the jack; see also col. 4, lines 2-3).

Regarding claims 2, 10 and 34, Scarlett shows that the presence of said headset is determined without using a mechanical switch which is in one position when said headset is present and is in another position otherwise.

Regarding claims 3 and 35, Scarlett shows the step of generating a signal having a first logical value if said headset is present and having a second logical value otherwise (see Tables 1 and 2).

Regarding claims 5, 6, 18, 19, 37 and 38, Scarlett further shows the step of discriminating whether the first headset is one of stereo headset, cellular headset and stereo+cellular headset based on the measuring (col. 2, lines 43-51, Fig. 1).

4. Claims 1-6, 9-12 and 18-23 are rejected under 35 U.S.C. 102(e) as being anticipated by Adams (US 6,594,366).

Regarding claims 1, 4-6, 9, 18, 19, Adams discloses a method and a corresponding device performed associated with a jack, said jack containing a plurality of connection points, said method comprising:

examining an impedance present between at least a pair of said plurality of connection points (see abstract, 210 is the impedance sensing circuit); and

determining whether a headset is present in said jack based on a value of said impedance (determining the type of the headset inherently determining whether a headset is present in the jack; see also col. 4, lines 24-25).

Regarding claims 2, 10, Adams shows that the presence of said headset is determined without using a mechanical switch which is in one position when said headset is present and is in another position otherwise.

Regarding claims 3, Adams shows the step of generating a signal having a first logical value if said headset is present and having a second logical value otherwise (Fig. 4).

Regarding claims 11, 20, Adams shows, in Fig. 4, that said detector circuit measures a voltage between said pair of said plurality of connection points and determines that said headset is present if said voltage (presented at the non-inverting input of 224) is low compared to a reference voltage (presented at the inverting input of 224). When the stereo headphone is inserted into the jack, the low impedance of the speaker will provide a low voltage at node N.

Regarding claim 12, Adams shows that said detector circuit comprises:

a first node being coupled to receive a bias voltage (3V), wherein said first node (N) is coupled to one of said pair of connection points (e.g. the plug coupled to speaker 226) and wherein the other one of said pair of connection points is coupled to Vss (as shown in Fig.4, the other end of the speaker 226), whereby said bias voltage is presented at said first node if said headset is not present and a low voltage is presented at said first node if said headset is present (see the explanation for claim 11); and

a comparator (224) having a first input terminal ("+") and a second input terminal ("−"), said first input terminal being connected to said first node (N), said second input being connected to said reference voltage (at the node between 216 and 220), wherein

said reference voltage is generated as a fraction of said bias voltage (caused by the voltage divider formed by resistors 216 and 220), wherein said comparator generates a signal having a first logical value if said headset is present and having a second logical value otherwise.

Regarding claims 21 and 23, Adams further shows that the voltage at node N will be low if the stereo headset is inserted, and will have a high voltage if it is not a stereo headset type (it is a headset with a microphone).

Regarding claim 22, the claimed logic gate reads on the control (208) since the cellular telephone unit processes digital signal using a chip formed by a plurality of logic gate.

Claim Rejections - 35 USC § 103

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

6. Claims 7, 8 and 39 are rejected under 35 U.S.C. 103(a) as being unpatentable over Scarlett.

Regarding claims 7, 8 and 39, Scarlett fails to explicitly show that the device will receive the first headset again into the jack. In view of the teaching by Scarlett as a whole, one skilled in the art would have expected that Scarlett's device would be able to detect the first headset type, the second headset type and the first headset type again.

The insertion of the first headset type again is a matter of user preference. Thus, it would have been obvious to one of ordinary skill in the art to utilize Scarlett's discrimination circuit to discriminate the type of headset being inserted regardless what the sequence and how many times that different type of headsets being inserted.

7. Claims 7, 8 and 39 are rejected under 35 U.S.C. 103(a) as being unpatentable over Adams.

Regarding claims 7, 8 and 39, Adams fails to explicitly show that the device will receive the first headset again into the jack. In view of the teaching by Adams as a whole, one skilled in the art would have expected that Adams' device would be able to detect the first headset type, the second headset type and the first headset type again. The insertion of the first headset type again is a matter of user preference. Thus, it would have been obvious to one of ordinary skill in the art to utilize Adams' discrimination circuit to discriminate the type of headset being inserted regardless what the sequence and how many times that different type of headsets being inserted.

Allowable Subject Matter

8. Claims 14-17 and 24-32 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

9. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Ping Lee whose telephone number is 571-272-7522. The examiner can normally be reached on Monday, Wednesday and Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Vivian C. Chin can be reached on 571-272-7848. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.



Ping Lee
Primary Examiner
Art Unit 2615

pwl